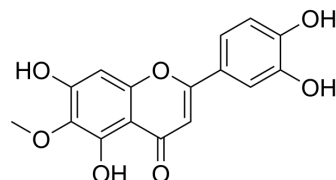


Nepetin

Cat. No.:	HY-N2572
CAS No.:	520-11-6
Molecular Formula:	C ₁₆ H ₁₂ O ₇
Molecular Weight:	316.26
Target:	Interleukin Related
Pathway:	Immunology/Inflammation
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 125 mg/mL (395.24 mM; ultrasonic and warming and heat to 60°C)				
	Preparing Stock Solutions	Solvent Concentration	1 mg	5 mg	10 mg
		1 mM	3.1620 mL	15.8098 mL	31.6196 mL
		5 mM	0.6324 mL	3.1620 mL	6.3239 mL
	10 mM	0.3162 mL	1.5810 mL	3.1620 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (6.58 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Nepetin (6-Methoxyluteolin) is a natural flavonoid isolated from <i>Eupatorium ballotaefolium</i> HBK with potent anti-inflammatory activities. Nepetin inhibits IL-6, IL-8 and MCP-1 secretion with IC ₅₀ values of 4.43 μM, 3.42 μM and 4.17 μM, respectively in ARPE-19 cells ^{[1][2]} .		
IC ₅₀ & Target	IL-1	IL-6	IL-8
In Vitro	<p>Pretreatment with Nepetin dose-dependently inhibited IL-6, IL-8 and MCP-1 secretion with IC₅₀ values of 4.43, 3.42 and 4.17 μM, respectively^[1].</p> <p>Nepetin (2.5-10 μM; 25 hours; ARPE-19 cells) treatment suppresses IL-1β-induced cytokine (IL-6, IL-8 and MCP-1) expression at mRNA level in ARPE-19 cells^[1].</p> <p>Nepetin (2.5-10 μM; 1.5 hours; ARPE-19 cells) treatment dose-dependently inhibits phosphorylation of IKKα/β and IκBα, and nuclear translocation of p65. Nepetin decreases the level of phosphorylated ERK1/2, JNK and p38 MAPK in activated ARPE-19 cells^[1].</p>		

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR^[1]

Cell Line:	ARPE-19 cells
Concentration:	2.5 μ M, 5 μ M, 10 μ M
Incubation Time:	25 hours
Result:	Suppressed the mRNA expression of IL-6, IL-8 and MCP-1 in ARPE-19 cells.

Western Blot Analysis^[1]

Cell Line:	ARPE-19 cells
Concentration:	2.5 μ M, 5 μ M, 10 μ M
Incubation Time:	1.5 hours
Result:	Dose-dependently inhibited phosphorylation of IKK α / β and I κ B α , and nuclear translocation of p65. Decreased the level of phosphorylated ERK1/2, JNK and p38 MAPK in activated ARPE-19 cells.

REFERENCES

[1]. Chen X, et al. Nepetin inhibits IL-1 β induced inflammation via NF- κ B and MAPKs signaling pathways in ARPE-19 cells. *Biomed Pharmacother.* 2018 May;101:87-93.

[2]. Militão GC, et al. Cytotoxic activity of nepetin, a flavonoid from *Eupatorium ballotaefolium* HBK. *Pharmazie.* 2004 Dec;59(12):965-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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